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     2
                Source of Registration (SR) information in REGISTRY updated
NEWS
     3 JAN 27
                 and searchable
                A new search aid, the Company Name Thesaurus, available in
NEWS 4 JAN 27
                CA/CAplus
                German (DE) application and patent publication number format
NEWS 5 FEB 05
                changes
                MEDLINE and LMEDLINE reloaded
NEWS 6 MAR 03
     7 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS
NEWS 8 MAR 03 FRANCEPAT now available on STN
NEWS 9 MAR 29 Pharmaceutical Substances (PS) now available on STN
NEWS 10 MAR 29 WPIFV now available on STN
NEWS 11 MAR 29 New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS 12 APR 26 PROMT: New display field available
NEWS 13 APR 26 IFIPAT/IFIUDB/IFICDB: New super search and display field
                available
NEWS 14 APR 26 LITALERT now available on STN
NEWS 15 APR 27 NLDB: New search and display fields available
NEWS 16 May 10 PROUSDDR now available on STN
NEWS 17 May 19 PROUSDDR: One FREE connect hour, per account, in both May
                 and June 2004
        May 12 EXTEND option available in structure searching
NEWS 18
        May 12 Polymer links for the POLYLINK command completed in REGISTRY
NEWS 19
                FRFULL now available on STN
NEWS 20
        May 17
                STN User Update to be held June 7 and June 8 at the SLA 2004
NEWS 21 May 27
                Conference
                New UPM (Update Code Maximum) field for more efficient patent
NEWS 22
        May 27
                 SDIs in CAplus
                CAplus super roles and document types searchable in REGISTRY
NEWS 23
        May 27
        May 27 Explore APOLLIT with free connect time in June 2004
NEWS 24
NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
             MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
             AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
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             CAS World Wide Web Site (general information)
NEWS WWW
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=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE TOTAL

> SESSION ENTRY

FULL ESTIMATED COST

0.21 0.21

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: May 28, 2004 (20040528/UP).

=> FIL HOME

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY SESSION 0.06 0.27

FILE 'HOME' ENTERED AT 15:13:47 ON 04 JUN 2004

=> file medline, uspatful, dgene, embase, wpids, fsta, japio, jicst, biosis

COST IN U.S. DOLLARS

SINCE FILE TOTAL

FULL ESTIMATED COST

ENTRY 0.21 SESSION 0.48

FILE 'MEDLINE' ENTERED AT 15:14:17 ON 04 JUN 2004

FILE 'USPATFULL' ENTERED AT 15:14:17 ON 04 JUN 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'DGENE' ENTERED AT 15:14:17 ON 04 JUN 2004 COPYRIGHT (C) 2004 THOMSON DERWENT

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FILE 'JICST-EPLUS' ENTERED AT 15:14:17 ON 04 JUN 2004 COPYRIGHT (C) 2004 Japan Science and Technology Agency (JST)

FILE 'BIOSIS' ENTERED AT 15:14:17 ON 04 JUN 2004 COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC. (R)

=> s Klebsiella or citrobacter

98740 KLEBSIELLA OR CITROBACTER

=> s zygosaccharomyces

2726 ZYGOSACCHAROMYCES L2

=> s debaryomyces

```
L3
          2524 DEBARYOMYCES
=> s l1 and l2
          158 L1 AND L2
=> s 14amd ;3
             0 L4AMD
3 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
=> s 14 and 13
L6
           53 L4 AND L3
=> s hansenula
         9938 HANSENULA
=> s 17 an d16
MISSING OPERATOR L7 AN
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.
=> s 17 and 16
            44 L7 AND L6
=> s bioconversion process
           382 BIOCONVERSION PROCESS
=> s 19 and (1,3-propanediol)
   5 FILES SEARCHED...
             4 L9 AND (1,3-PROPANEDIOL)
=> d l10 ti abs ibib tot
L10 ANSWER 1 OF 4 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
     on STN
     Biotransformation of 2,2-dimethyl-1,3-
ΤI
     propanediol to 3-hydroxypivalic acid by Acetobacter acetii
     DSMZ3508 and related bacteria.
    Acetobacter acetii DSMZ3508 and related bacteria converted 2,2-dimethyl-
AB
     1,3-propanediol into 3-hydroxypivalic acid
     (2,2-dimethyl-3-hydroxypropionic acid; 3HP) during submerged cultivation
     in mineral salt medium. The maximum yield of 3-hydroxypivalic acid was
     24.4% of the fed substrate after 18 days. Cultivation parameters, as pH,
     cell density, optimal substrate concentration, and oxygen supply for the
    bioconversion process were determined.
ACCESSION NUMBER:
                    1998207842 EMBASE
                    Biotransformation of 2,2-dimethyl-1,3-
TITLE:
                    propanediol to 3-hydroxypivalic acid by Acetobacter
                    acetii DSMZ3508 and related bacteria.
                    Fuchtenbusch B.; Waltermann M.; Steinbuchel A.
AUTHOR:
CORPORATE SOURCE:
                    B. Fuchtenbusch, Institut fur Mikrobiologe, Westfalischen
                    Wilhelms-Univ. Munster, Corrensstrasse 3, D-48149 Munster,
                    Germany
                    Biotechnology Letters, (1998) 20/5 (507-510).
SOURCE:
                    Refs: 9
                    ISSN: 0141-5492 CODEN: BILED3
                    United Kingdom
COUNTRY:
DOCUMENT TYPE:
                    Journal; Article
FILE SEGMENT:
                    004
                            Microbiology
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English

LANGUAGE:

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SUMMARY LANGUAGE:
                     English
L10 ANSWER 2 OF 4 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
     Production of 1,3-propane diol, useful in polymer production - by fermenting
     carbon source with single de hydratase expressing microbe, partic.
     recombinant E. coli carrying Klebsiella gene.
AN
     1996-518684 [51]
                          WPIDS
CR
     2001-257443 [26]
AB
          9635796 A UPAB: 20030513
       Bioconversion process to produce 1,3
     -propanediol, comprises incubating a carbon substrate with a
     single microorganism containing at least 1 gene expressing a dehydratase.
           USE - 1,3-propanediol is used in the
     production of polyester fibres, polyurethanes and cyclic cpds..
           ADVANTAGE - 1,3-propanediol can be
     produced rapidly, inexpensively and in an environmentally acceptable
     procedure.
     Dwg.0/2
          5686276 A UPAB: 19971222
ABEQ US
     A process comprising the bioconversion of a carbon substrate, other than
     glycerol or dihydroxyacetone, to 1,3-
     propanediol by a single microorganism having at least one gene
     that expresses a dehydratase enzyme by contacting the microorganism with
     the substrate.
     Dwg.0/2
ACCESSION NUMBER:
                       1996-518684 [51]
                                            WPIDS
CROSS REFERENCE:
                       2001-257443 [26]
DOC. NO. CPI:
                       C1996-162922
TITLE:
                       Production of 1,3-propane diol, useful in polymer production
- by
                        fermenting carbon source with single de hydratase
                        expressing microbe, partic. recombinant E. coli carrying
                       Klebsiella gene.
DERWENT CLASS:
                       A41 D16 E17 F01
INVENTOR(S):
                       LAFFEND, L A; NAGARAJAN, V; NAKAMURA, C E
PATENT ASSIGNEE(S):
                        (DUPO) DU PONT DE NEMOURS & CO E I; (GEMV) GENENCOR INT
                       INC
COUNTRY COUNT:
                        64
PATENT INFORMATION:
     PATENT NO
                     KIND DATE
                                    WEEK
                                               LA PG
     WO 9635796
                      A1 19961114 (199651) * EN 109
        RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD
             SE SZ UG
         W: AL AU BB BG BR CA CN CZ EE GE HU IS JP KP KR LK LR LT LV MG MK MN
            MX NO NZ PL RO SG SI SK TR TT UA US UZ VN
     AU 9656789
                      A 19961129 (199712)
                      A 19971111 (199751)
A 19980128 (199810)
     US 5686276
                                                   14
     ZA 9603737
     EP 826057
                      A1 19980304 (199813) EN
         R: AT BE CH DE DK ES FI FR GB IE IT LI NL PT SE
     JP 11502718 W 19990309 (199920)
                                                 133
     BR 9608831
                     A 19990615 (199929)
                     A1 19980201 (199954)
     MX 9708687
     US 6025184
                     A 20000215 (200016)
     US 6025184 A 20000215 (200016)
KR 99014710 A 19990225 (200018)
    AU 725012 B 20001005 (200054)
AU 2000071565 A 20010208 (200113)#
IL 118169 A 20010319 (200129)
MX 201521 B 20010424 (200223)
IL 130789 A 20020421 (200240)
CN 1189854 A 19980805 (200223)
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56

CN 1189854 A 19980805 (200272)
JP 3403412 B2 20030506 (200330)

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9635796	A1	WO 1996-US6705	
AU 9656789	A	AU 1996-56789	
US 5686276	A	US 1995-440293	
ZA 9603737	A	ZA 1996-3737	
EP 826057	A1	EP 1996-913988	
		WO 1996-US6705	19960510
JP 11502718	W	JP 1996-534295	19960510
		WO 1996-US6705	19960510
BR 9608831	A	BR 1996-8831	19960510
		WO 1996-US6705	
MX 9708687	A1	MX 1997-8687	
US 6025184	A Div ex	US 1995-440293	
		US 1997-966794	
KR 99014710	A	WO 1996-US6705	19960510
		KR 1997-708052	
AU 725012	В	AU 1996-56789	19960510
AU 2000071565	A Div ex	AU 1996-56789	
		AU 2000-71565	20001113
IL 118169	A	IL 1996-118169	19960507
MX 201521	В	MX 1997-8687	19971111
IL 130789	A Div ex	IL 1996-118169	19960507
		IL 1996-130789	19960507
CN 1189854	A	CN 1996-195288	19960510
JP 3403412	B2	JP 1996-534295	19960510
		WO 1996-US6705	19960510

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9656789	A Based on	WO 9635796
EP 826057	A1 Based on	WO 9635796
JP 11502718	W Based on	WO 9635796
BR 9608831	A Based on	WO 9635796
US 6025184	A Div ex	US 5686276
KR 99014710	A Based on	WO 9635796
AU 725012	B Previous Publ.	AU 9656789
	Based on	WO 9635796
AU 2000071565	A Div ex	AU 725012
IL 130789	A Div ex	IL 118169
JP 3403412	B2 Previous Publ.	JP 11502718
	Based on	WO 9635796

PRIORITY APPLN. INFO: US 1995-440293 19950512;
1997-966794 19971110; AU
20001113 19950512; US

L10 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN Production of 1,3-propanediol from glycerol

by recombinant bacteria expressing recombinant diol dehydratase.

ACCESSION NUMBER: 2002:126435 BIOSIS DOCUMENT NUMBER:

PREV200200126435

TITLE:

Production of 1,3-propanediol

from glycerol by recombinant bacteria expressing

recombinant diol dehydratase.

AUTHOR(S): Nagarajan, V [Inventor]; Nakamura, C. E. [Inventor]

Wilmington, Del., USA CORPORATE SOURCE:

ASSIGNEE: E. I. DU PONT DE NEMOURS AND COMPANY

PATENT INFORMATION: US 5821092 Oct. 13, 1998

```
Official Gazette of the United States Patent and Trademark
SOURCE:
                    Office Patents, (Oct. 13, 1998) Vol. 1215, No. 2, pp. 1790.
                    print.
                    CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE:
                    Patent
LANGUAGE:
                    English
                    Entered STN: 30 Jan 2002
ENTRY DATE:
                    Last Updated on STN: 26 Feb 2002
L10 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
    Biotransformation of 2,2-dimethyl-1,3-
     propanediol to 3-hydroxypivalic acid by Acetobacter acetii
     DSMZ3508 and related bacteria.
     Acetobacter acetii DSMZ3508 and related bacteria converted 2,2-dimethyl-
AB
     1,3-propanediol into 3-hydroxypivalic acid
     (2,2-dimethyl-3-hydroxypropionic acid; 3HP) during submerged cultivation
     in mineral salt medium. The maximum yield of 3-hydroxypivalic acid was
     24.4% of the fed substrate after 18 days. Cultivation parameters, as pH,
     cell density, optimal substrate concentration, and oxygen supply for the
     bioconversion process were determined.
ACCESSION NUMBER: 1998:324244 BIOSIS
                    PREV199800324244
DOCUMENT NUMBER:
                    Biotransformation of 2,2-dimethyl-1,3-
TITLE:
                    propanediol to 3-hydroxypivalic acid by Acetobacter
                    acetii DSMZ3508 and related bacteria.
                    Fuechtenbusch, Bernd; Waeltermann, Marc; Steinbuechel,
AUTHOR(S):
                    Alexander
                    Inst. Mikrobiol. Westfaelischen Wilhelms-Univ. Muenster,
CORPORATE SOURCE:
                    Corrensstrasse 3, D-48149 Muenster, Germany
                    Biotechnology Letters, (May, 1998) Vol. 20, No. 5, pp.
SOURCE:
                    507-510. print.
                    CODEN: BILED3. ISSN: 0141-5492.
                    Article
DOCUMENT TYPE:
                    English
LANGUAGE:
                    Entered STN: 22 Jul 1998
ENTRY DATE:
                    Last Updated on STN: 10 Sep 1998
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     FILE 'STNGUIDE' ENTERED AT 15:13:42 ON 04 JUN 2004
     FILE 'HOME' ENTERED AT 15:13:47 ON 04 JUN 2004
     FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, JAPIO, JICST-EPLUS,
     BIOSIS' ENTERED AT 15:14:17 ON 04 JUN 2004
          98740 S KLEBSIELLA OR CITROBACTER
L1
L2
           2726 S ZYGOSACCHAROMYCES
L3
           2524 S DEBARYOMYCES
L4
            158 S L1 AND L2
L5
              0 S L4AMD
             53 S L4 AND L3
L6
           9938 S HANSENULA
L7
             44 S L7 AND L6
L8
Ь9
            382 S BIOCONVERSION PROCESS
              4 S L9 AND (1,3-PROPANEDIOL)
L10
=> s 110 and 18
             0 L10 AND L8
L11
=> s glycerol dehydratase
           479 GLYCEROL DEHYDRATASE
L12
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=> s l12 and dihydocacetone 0 L12 AND DIHYDOCACETONE

=>

=>

=>

=>

=>

=>

=> s 112 and dihydroxacetone

0 L12 AND DIHYDROXACETONE

=> d 18 ti abs ibib 1-20

ANSWER 1 OF 44 USPATFULL on STN L8

Microbial conversion of glucose to para-hydroxystyrene TI

An in vivo method for the production of pHS via a recombinant host cell AB is disclosed. The host cell expresses at least one gene encoding a polypeptide having para-hydroxycinnamic acid decarboxylase activity in combination with either at least one gene encoding a polypeptide having tyrosine ammonia lyase activity or at least one gene encoding a polypeptide having phenylalanine ammonia lyase activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2004:24761 USPATFULL

TITLE:

Microbial conversion of glucose to para-hydroxystyrene

INVENTOR(S):

Ben-Bassat, Arie, Newark, DE, UNITED STATES

Qi, Wei Wei, Broomall, PA, UNITED STATES

Sariaslani, Fateme Sima, Wilmington, DE, UNITED STATES

Tang, Xiao-Song, Hockessin, DE, UNITED STATES Vannelli, Todd M., Ithaca, NY, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004018600	A1	20040129	
ADDITON TARO .	110 2002 420470	7. 1	20020516	1-

APPLICATION INFO.:

A1 20030516 (10) US 2003-439478

NUMBER DATE \_\_\_\_\_\_

PRIORITY INFORMATION:

US 2002-383450P 20020523 (60)

DOCUMENT TYPE: FILE SEGMENT:

Utility

APPLICATION

LEGAL REPRESENTATIVE:

E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

NUMBER OF CLAIMS: 21 EXEMPLARY CLAIM:

2653 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 44 USPATFULL on STN LA

Method for high-density microarray mediated gene expression profiling TI

The global effect on genes under different environmental conditions can AB be determined by a comprehensive gene expression profile. The present invention provides a method to monitor the changes in comprehensive cellular gene expression levels at single length resolution by using a high-density microarray prepared with a comprehensive collection of ORFs of a genome. Under different environmental conditions, directly and indirectly affected genes can be detected as the gene expression levels are induced or repressed in comparison to the control.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:2074 USPATFULL

TITLE:

Method for high-density microarray mediated gene

expression profiling

INVENTOR(S):

Larossa, Robert A., West Chester, PA, UNITED STATES

Wei, Yan, West Caldwell, NJ, UNITED STATES

NUMBER KIND DATE -----

PATENT INFORMATION: US 2004002094 A1 20040101 APPLICATION INFO.: US 2003-393075 A1 20030320 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-686383, filed on 11 Oct

2000, PENDING

NUMBER DATE ------

PRIORITY INFORMATION:

US 1999-159898P 19991015 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE: E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

18 1

NUMBER OF DRAWINGS: 5 Drawing Page(s)

LINE COUNT:

3850

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8ANSWER 3 OF 44 USPATFULL on STN

Nucleic acid that encodes a fusion protein TI

AB This invention provides fusion polypeptides that include a glycosyltransferase catalytic domain and a catalytic domain from an accessory enzyme that is involved in making a substrate for a glycosyltransferase reaction. Nucleic acids that encode the fusion polypeptides are also provided, as are host cells for expressing the fusion polypeptides of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:265399 USPATFULL

TITLE:

Nucleic acid that encodes a fusion protein

INVENTOR(S):

Gilbert, Michel, Hull, CANADA

Young, N. Martin, Gloucester, CANADA Wakarchuk, Warren W., Gloucester, CANADA

PATENT ASSIGNEE(S):

National Research Council of Canada, Ottawa, CANADA,

K1A0R6 (non-U.S. corporation)

NUMBER KIND DATE \_\_\_\_\_\_ US 2003186414 A1 20031002 US 2002-317428 A1 20021211 (10) PATENT INFORMATION:

APPLICATION INFO.: RELATED APPLN. INFO.:

Division of Ser. No. US 1998-211691, filed on 14 Dec

1998, PENDING

NUMBER DATE \_\_\_\_\_\_

PRIORITY INFORMATION:

US 1997-69443P 19971215 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 35 NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 2360

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 44 USPATFULL on STN 1.8

ΤI Fusion protein comprising a UDP-Galnac 4' epimerase and a galnac

transferase

This invention provides fusion polypeptides that include a AB glycosyltransferase catalytic domain and a catalytic domain from an accessory enzyme that is involved in making a substrate for a glycosyltransferase reaction. Nucleic acids that encode the fusion polypeptides are also provided, as are host cells for expressing the fusion polypeptides of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:257877 USPATFULL

TITLE: Fusion protein comprising a UDP-Galnac 4' epimerase and

a galnac transferase

Gilbert, Michel, Hull, CANADA INVENTOR(S):

> Young, N. Martin, Gloucester, CANADA Wakarchuk, Warren W., Gloucester, CANADA

PATENT ASSIGNEE(S): National Research Council of Canada, Ottawa, CANADA,

K1A0R6 (non-U.S. corporation)

NUMBER KIND DATE -----US 2003180928 A1 20030925 US 2002-317773 A1 20021211

PATENT INFORMATION: APPLICATION INFO.: (10)

Division of Ser. No. US 1998-211691, filed on 14 Dec RELATED APPLN. INFO.:

1998, PENDING

NUMBER DATE \_\_\_\_\_\_

US 1997-69443P 19971215 (60) PRIORITY INFORMATION:

Utility DOCUMENT TYPE: APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 35 EXEMPLARY CLAIM: 1

4 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 2203

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 44 USPATFULL on STN L8

Isolation and expression of a gene for a nitrilase from Acidovorax TIfacilis 72W

Recombinant microbial strains are provided that express nitrilase enzyme ABand are useful as biocatalysts for the hydrolysis of nitrile-containing substrates. The recombinant cells are transformed with a foreign gene isolated from Acidovorax facilis 72W encoding a thermostable nitrilase enzyme that catalyzes the hydrolysis of nitrile-containing substrates to carboxylic acids under mild reaction conditions. The nucleotide sequence of the nitrilase gene and the deduced amino acid sequence encoded by the nitrilase gene are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:237811 USPATFULL

TITLE: Isolation and expression of a gene for a nitrilase from

Acidovorax facilis 72W

INVENTOR(S): Chauhan, Sarita, Landenberg, PA, UNITED STATES

Dicosimo, Robert, Rockland, DE, UNITED STATES

Fallon, Robert D., Elkton, MD, UNITED STATES Gavagan, John E., Wilmington, DE, UNITED STATES Payne, Mark S., Wilmington, DE, UNITED STATES

KIND \_\_\_\_\_

PATENT INFORMATION:

US 2003165968 A1 20030904 US 2003-376653 A1 20030227

APPLICATION INFO.:

20030227 (10)

RELATED APPLN. INFO.:

Division of Ser. No. US 2001-823373, filed on 30 Mar

2001, PENDING

NUMBER DATE \_\_\_\_\_\_

PRIORITY INFORMATION:

US 2000-193707P 20000331 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT:

TI

AB

2516

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8ANSWER 6 OF 44 USPATFULL on STN

Process for the biological production of 1,3-propanediol with high titer The present invention provides an improved method for the biological production of 1,3-propanediol from a fermentable carbon source in a single microorganism. In one aspect of the present invention, an improved process for the conversion of glucose to 1,3-propanediol is achieved by the use of an E. coli transformed with the Klebsiella pneumoniae dha regulon genes dhaR, orfY, dhaT, orfX, orfW, dhaB1, dhaB2, dhaB3, and orfZ, all these genes arranged in the same genetic organization as found in wild type Klebsiella pneumoniae. In another aspect of the present invention, an improved process for the production of 1,3-propanediol from glucose using a recombinant E. coli containing genes encoding a G3PDH, a G3P phosphatase, a dehydratase, and a dehydratase reactivation factor compared to an identical process using a recombinant E. coli containing genes encoding a G3PDH, a G3P phosphatase, a dehydratase, a dehydratase reactivation factor and a 1,3-propanediol oxidoreductase (dhaT). The dramatically improved process relies on the presence in E. coli of a gene encoding a non-specific catalytic activity sufficient to convert 3-hydroxypropionaldehyde to 1,3-propanediol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2003:225862 USPATFULL

TITLE:

Process for the biological production of

1,3-propanediol with high titer

INVENTOR(S):

Emptage, Mark, Wilmington, DE, UNITED STATES

Haynie, Sharon L., Philadelphia, PA, UNITED STATES

Laffend, Lisa A., Claymont, DE, UNITED STATES Pucci, Jeff P., Pacifica, CA, UNITED STATES

Whited, Gregory Marshall, Belmont, CA, UNITED STATES

NUMBER KIND DATE -----

PATENT INFORMATION:

APPLICATION INFO.:

US 2003157674 A1 20030821 US 2002-277249 A1 20021021 (10)

RELATED APPLN. INFO.:

Division of Ser. No. US 2000-641652, filed on 18 Aug

2000, PENDING

NUMBER DATE

US 1999-149534P 19990818 (60)

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT

RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 3915 LINE COUNT:

PRIORITY INFORMATION:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 44 USPATFULL on STN L8

Method for high-density microarray medicated gene expression profiling TΙ The global effect on genes under different environmental conditions can AB be determined by a comprehensive gene expression profile. The present invention provides a method to monitor the changes in comprehensive cellular gene expression levels at single length resolution by using a high-density microarray prepared with a comprehensive collection of ORFs of a genome. Under different environmental conditions, directly and indirectly affected genes can be detected as the gene expression levels are induced or repressed in comparison to the control.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

2003:222021 USPATFULL ACCESSION NUMBER:

Method for high-density microarray medicated gene TITLE:

expression profiling

Larossa, Robert A., West Chester, PA, United States INVENTOR(S):

Wei, Yan, West Caldwell, NJ, United States

E. I. du Pont de Nemours and Company, Wilmington, DE, PATENT ASSIGNEE(S):

United States (U.S. corporation)

NUMBER KIND DATE US 6607885 B1 20030819 US 2000-686383 20001011 PATENT INFORMATION: APPLICATION INFO.:

20001011 (9)

NUMBER DATE \_\_\_\_\_

PRIORITY INFORMATION: US 1999-159898P 19991015 (60)

DOCUMENT TYPE:

FILE SEGMENT:

PRIMARY EXAMINER:

ASSISTANT EXAMINER:

NUMBER OF CLAIMS:

Utility

GRANTED

Horlick, Kenneth R.

Wilder, Cynthia

14 NUMBER OF CLAIMS: EXEMPLARY CLAIM:

7 Drawing Figure(s); 5 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 2849

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 8 OF 44 USPATFULL on STN L8

Process to separate 1,3-propanediol or glycerol, or a mixture thereof TI from a biological mixture

A process is provided to separate 1,3-propanediol, glycerol, or a AB mixture of 1,3-propanediol and glycerol from a biological mixture using a molecular sieve.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

2003:210113 USPATFULL ACCESSION NUMBER:

Process to separate 1,3-propanediol or glycerol, or a TITLE:

mixture thereof from a biological mixture

Corbin, David Richard, West Chester, PA, United States INVENTOR(S):

Norton, Tucker, Avondale, PA, United States

E. I. du Pont de Nemours and Company, Wilmington, DE, PATENT ASSIGNEE(S):

United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6603048	В1	20030805	
APPLICATION INFO.:	US 2000-677121		20000929	(9)

NUMBER DATE \_\_\_\_\_\_

PRIORITY INFORMATION: US 1999-157773P 19991005 (60) US 1999-158204P 19991007 (60)

Utility DOCUMENT TYPE: FILE SEGMENT: GRANTED

FILE SEGMENT:

PRIMARY EXAMINER:

ASSISTANT EXAMINER:

Price, Elvis O.

NUMBER OF CLAIMS:

4

EXEMPLARY CLAIM:

6 Drawing Figure(s); 6 Drawing Page(s) NUMBER OF DRAWINGS:

788 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 9 OF 44 USPATFULL on STN L8

Processes for producing optically active 2-amino-1-phenylethanol TI derivatives

An (R)-2-amino-1-phenylethanol derivative shown by the general formula AΒ ##STR1## (IIa)

wherein R.sup.1 and R.sup.5 represent a hydrogen atom, etc.; R.sup.2, R.sup.3 and R.sup.4 independently represent a halogen atom, etc., or a salt thereof, can readily be produced (1) by permitting a microorganism belonging to the genus Rhodosporidium, the genus Comamonas or the like to act on a mixture of corresponding (R)-form and (S)-form to asymmetrically utilize, or (2) by permitting a microorganism belonging to the genus Lodderomyces, the genus Pilimelia or the like to act on a corresponding aminoketone derivative to asymmetrically reduce. An (R,R)-1-phenyl-2-[(2-phenyl-1-alkylethyl)amino]ethanol derivative having a high optical purity can easily be obtained from the compound of the formula (IIa) or a salt thereof. Said derivative is useful as an intermediate for producing an anti-obesity agent and so on.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

INVENTOR(S):

2003:207343 USPATFULL ACCESSION NUMBER:

Processes for producing optically active TITLE:

2-amino-1-phenylethanol derivatives Matsuyama, Akinobu, Arai-shi, JAPAN

Ito, Michio, Joetsu-shi, JAPAN

Daicel Chemical Industries, Ltd. (non-U.S. corporation) PATENT ASSIGNEE(S):

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003143701	A1	20030731
APPLICATION INFO.:	US 2002-208047	A1	20020731 (10)
RELATED APPLN. INFO.:	Division of Ser.	No. US	2000-597830, filed

on 19 Jun 2000, PENDING Division of Ser. No. US 1998-95733, filed on 11 Jun 1998, GRANTED, Pat. No. US 6114582 Division of Ser. No. US 1996-738864, filed on 28 Oct 1996, GRANTED, Pat. No. US 5811293 Division of Ser. No. US 1994-343952, filed on 17 Nov 1994, GRANTED, Pat. No. US

5629200

		NUMBER	DATE
PRIORITY	INFORMATION:	JP 1993-289419	19931118
		JP 1994-83014	19940424

JP 1993-319046 19931124 JP 1994-183217 19940804 JP 1994-40172 19940310

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE: PILLSBURY WINTHROP, LLP, P.O. BOX 10500, MCLEAN, VA,

22102

NUMBER OF CLAIMS:

38 1

EXEMPLARY CLAIM: LINE COUNT:

5163

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 44 USPATFULL on STN L8

Methods for enzymatic conversion of GDP-mannose to GDP-fucose TI

AB This invention provides methods for practical enzymatic conversion of GDP-mannose to GDP-fucose. These methods are useful for efficient synthesis of reactants used in the synthesis of fucosylated oligosaccharides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2003:207209 USPATFULL

TITLE:

Methods for enzymatic conversion of GDP-mannose to

GDP-fucose

INVENTOR(S):

Sjoberg, Eric R., San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S):

Cytel Corporation (U.S. corporation)

NUMBER KIND DATE -----(10)

PATENT INFORMATION: APPLICATION INFO.:

US 2003143567 A1 20030731 US 2002-206655 A1 20020725

RELATED APPLN. INFO.:

Division of Ser. No. US 1999-231905, filed on 14 Jan

1999, GRANTED, Pat. No. US 6500661

NUMBER DATE

PRIORITY INFORMATION:

\_\_\_\_\_\_\_ US 1998-71076P 19980115 (60)

DOCUMENT TYPE:

Utility APPLICATION

NUMBER OF CLAIMS: 55

EXEMPLARY CLAIM: 1

NUMBER OF CLAIM: 1 LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO

NUMBER OF DRAWINGS:

11 Drawing Page(s)

LINE COUNT:

2449

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 44 USPATFULL on STN L8

 $\mathtt{TI}$ Nucleic acids useful for enzymatic conversion of GDP-mannose to

GDP-fucose

AB This invention provides methods for practical enzymatic conversion of GDP-mannose to GDP-fucose. These methods are useful for efficient synthesis of reactants used in the synthesis of fucosylated

oligosaccharides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2003:194592 USPATFULL

TITLE:

Nucleic acids useful for enzymatic conversion of

GDP-mannose to GDP-fucose

INVENTOR(S):

Sjoberg, Eric R., San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Cytel Corporation (U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 2003134403 A1 20030717

US 2002-206485 20020725 (10) APPLICATION INFO.: A1

Division of Ser. No. US 1999-231905, filed on 14 Jan RELATED APPLN. INFO.:

1999, GRANTED, Pat. No. US 6500661

NUMBER DATE -----

PRIORITY INFORMATION: US 1998-71076P 19980115 (60)

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO

CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 11 Drawing Page(s)

LINE COUNT: 2445

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 44 USPATFULL on STN

Solubility reporter gene constructs TI

The present invention provides polynucleotides that a protein solubility AB responsive promoter operatively liked to a reporter gene and a genetic reporter system comprising these polynucleotides together with an expression construct for a target protein. The invention also provides cells comprising polynucleotides of the invention and the genetic reporter system. These compositions are useful to monitor the solubility of a target protein in a cell and to identify mutations to the cell or mutations to a polynucleotide encoding the target protein that alters the solubility of the target protein. The invention further provides method to identify variations in a protein biosynthetic process that alter the solubility of a target protein and methods to screen an expression library of recombinant clones to identify clones that express soluble proteins. Finally, the invention discloses a novel method of identifying an antibiotic agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:173250 USPATFULL

Solubility reporter gene constructs TITLE:

INVENTOR(S): Lesley, Scott A., San Diego, CA, UNITED STATES

Knuth, Mark, El Cajon, CA, UNITED STATES

IRM LLC (U.S. corporation) PATENT ASSIGNEE(S):

NUMBER KIND DATE -----PATENT INFORMATION: US 2003119094 A1 20030626 US 2001-990099 A1 20011121 (9) APPLICATION INFO.:

NUMBER DATE -----

PRIORITY INFORMATION: US 2001-324833P 20010924 (60) DOCUMENT TYPE:

Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: TIMOTHY L. SMITH, GENOMICS INSTITUTE OF THE, NOVARTIS

RESEARCH FOUNDATION, 10675 JOHN JAY HOPKINS DRIVE,

SUITE E225, SAN DIEGO, CA, 92121-1127

NUMBER OF CLAIMS: 76 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 4 Drawing Page(s)

LINE COUNT: 2230

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8ANSWER 13 OF 44 USPATFULL on STN

TI 1,3-propanediol and polymer derivatives from a fermentable carbon source

AB A new polypropylene terephthalate composition is provided. The polypropylene terephthalate is comprised of 1,3-propanediol and

terephthalate. The 1,3-propanediol is produced by the bioconversion of a fermentatble carbon source, preferable glucose. The resulting polypropylene terephthalate is distinguished from petrochemically produced polymer on the basis of dual carbon-isotopic fingerprinting which indicates both the source and the age of the carbon.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2003:120275 USPATFULL

TITLE:

1,3-propanediol and polymer derivatives from a

fermentable carbon source

INVENTOR(S):

Burch, Robert R., Exton, PA, UNITED STATES Dorsch, Robert R., Hockessin, DE, UNITED STATES Laffend, Lisa Anne, Claymont, DE, UNITED STATES Nagarajan, Vasantha, Wilmington, DE, UNITED STATES

Nakamura, Charles, Claymont, DE, UNITED STATES

NUMBER KIND DATE \_\_\_\_\_\_

PATENT INFORMATION:

APPLICATION INFO.:

US 2003082756 A1 20030501 US 2002-213203 A1 20020805 20020805 (10)

RELATED APPLN. INFO.:

Division of Ser. No. US 1999-369796, filed on 6 Aug 1999, GRANTED, Pat. No. US 6428767 Continuation-in-part

of Ser. No. US 1997-966794, filed on 10 Nov 1997, GRANTED, Pat. No. US 6025184 Division of Ser. No. US 1995-440293, filed on 12 May 1995, GRANTED, Pat. No. US

5686276

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT

RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

16 1

NUMBER OF DRAWINGS:

6 Drawing Page(s)

LINE COUNT:

1785

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 14 OF 44 USPATFULL on STN L8

TIProcesses for producing optically active 2-amino-1-phenylethanol derivatives

An (R)-2-amino-1-phenylethanol derivative shown by the general formula AB ##STR1## (IIa)

wherein R.sup.1 and R.sup.5 represent a hydrogen atom, etc.; R.sup.2, R.sup.3 and R.sup.4 independently represent a halogen atom, etc., or a salt thereof, can readily be produced (1) by permitting a microorganism belonging to the genus Rhodosporidium, the genus Comamonas or the like to act on a mixture of corresponding (R)-form and (S)-form to asymmetrically utilize, or (2) by permitting a microorganism belonging to the genus Lodderomyces, the genus Pilimelia or the like to act on a corresponding aminoketone derivative to asymmetrically reduce. An (R,R)-1-phenyl-2-[(2-phenyl-1-alkylethyl)amino]ethanol derivative having a high optical purity can easily be obtained from the compound of the formula (IIa) or a salt thereof. Said derivative is useful as an intermediate for producing an anti-obesity agent and so on.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2003:60322 USPATFULL

TITLE:

Processes for producing optically active

2-amino-1-phenylethanol derivatives

INVENTOR(S):

Akamatsu, Hidekazu, Arai, JAPAN

Yamasaki, Noritsugu, Tsukuba, JAPAN

PATENT ASSIGNEE(S):

Daicel Chemical Industries, Ltd., Osaka, JAPAN

(non-U.S. corporation)

DATE KIND NUMBER \_\_\_\_\_\_

PATENT INFORMATION: APPLICATION INFO.:

US 6528686 B1 20030304 US 2000-597830 20000619 (9)

RELATED APPLN. INFO.:

Division of Ser. No. US 1998-95733, filed on 11 Jun 1998, now patented, Pat. No. US 6114582 Division of Ser. No. US 1996-738864, filed on 28 Oct 1996, now patented, Pat. No. US 5811293 Division of Ser. No. US 1994-343952, filed on 17 Nov 1994, now patented, Pat.

No. US 5629200

NUMBER DATE \_\_\_\_\_ JP 1993-289419 19931118 JP 1993-319046 19931124 JP 1994-40172 19940310 JP 1994-83014 19940421 JP 1994-183217 19940804 PRIORITY INFORMATION:

DOCUMENT TYPE: Utility GRANTED FILE SEGMENT:

PRIMARY EXAMINER: Kumar, Shailendra LEGAL REPRESENTATIVE: Pillsbury Winthrop LLP

NUMBER OF CLAIMS: 11 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

4455 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 15 OF 44 USPATFULL on STN L8

Mutant 1,3-propanediol dehydrogenase ΤI

The present invention relates to mutant 1,3-propanediol dehydrogenase AB and a novel microorganism that is capable of growing in concentrations of at least 105 g/l 1,3-propanediol, levels normally toxic to wild-type microorganisms. The present invention also provides expression vectors and host cells comprising the mutant 1,3-propanediol dehydrogenase as well as methods for producing 1,3-propanediol comprising the use of cells comprising the mutant 1,3-propanediol dehydrogenase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2003:57527 USPATFULL

TITLE:

Mutant 1,3-propanediol dehydrogenase

INVENTOR(S):

Donald, Trimbur E., Redwood City, CA, UNITED STATES

Gregory, Whited M., Belmont, CA, UNITED STATES Selifonova, Olga V., Navarre, MN, UNITED STATES

NUMBER KIND DATE -----US 2003040091 A1 20030227 US 6558933 B2 20030506 PATENT INFORMATION: US 6558933 B2 20030506 US 2001-991138 A1 20011116 (9) APPLICATION INFO.: RELATED APPLN. INFO.: Division of Ser. No. US 2000-570778, filed on 14 May

2000, PENDING

NUMBER DATE \_\_\_\_\_

PRIORITY INFORMATION:

US 1999-134868P 19990519 (60)

DOCUMENT TYPE:

Utility APPLICATION

LEGAL REPRESENTATIVE: Genencor International, Inc., 925 Page Mill Road, Palo

Alto, CA, 94034-1013

NUMBER OF CLAIMS:

FILE SEGMENT:

19

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 7 Drawing Page(s)

LINE COUNT: 914

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 16 OF 44 USPATFULL on STN

TI Process for the biological production of 1,3-propanediol with high titer AB The present invention provides an improved method for the biological production of 1,3-propanediol from a fermentable carbon source in a single microorganism. In one aspect of the present invention, an improved process for the conversion of glucose to 1,3-propanediol is achieved by the use of an E. coli transformed with the Klebsiella pneumoniae dha regulon genes dhaR, orfY, dhaT, orfX, orfW, dhaB1, dhaB2, dhaB3, and orfZ, all these genes arranged in the same genetic organization as found in wild type Klebsiella pneumoniae. In another aspect of the present invention, an improved process for the production of 1,3-propanediol from glucose using a recombinant E. coli containing genes encoding a G3PDH, a G3P phosphatase, a dehydratase, and a dehydratase reactivation factor compared to an identical process using a recombinant E. coli containing genes encoding a G3PDH, a G3P phosphatase, a dehydratase, a dehydratase reactivation factor and a 1,3-propanediol oxidoreductase (dhaT). The dramatically improved process relies on the presence in E. coli of a gene encoding a non-specific catalytic activity sufficient to convert 3-hydroxypropionaldehyde to 1,3-propanediol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:33323 USPATFULL

TITLE: Process for the biological production of

1,3-propanediol with high titer

INVENTOR(S): Emptage, Mark, Wilmington, DE, United States

Haynie, Sharon L., Philadelphia, PA, United States Laffend, Lisa A., Claymont, DE, United States

Pucci, Jeff P., Pacifica, CA, United States Whited, Gregory, Belmont, CA, United States

PATENT ASSIGNEE(S): E. I. du Pont de Nemours and Company, Wilmington, DE,

United States (U.S. corporation)

NUMBER KIND DATE

US 6514733 B1 20030204
US 2000-641652 20000818 (9)

NUMBER DATE

PRIORITY INFORMATION: US 1999-149534P 19990818 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Prouty, Rebecca E.
ASSISTANT EXAMINER: Walicka, Malgorzata A

NUMBER OF CLAIMS: 6 EXEMPLARY CLAIM: 1

PATENT INFORMATION:

APPLICATION INFO.:

NUMBER OF DRAWINGS: 6 Drawing Figure(s); 6 Drawing Page(s)

LINE COUNT: 3730

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 17 OF 44 USPATFULL on STN

TI METHOD FOR THE RECOMBINANT PRODUCTION OF 1,3-PROPANEDIOL

The present invention provides an improved method for the production of 1,3-propanediol from a variety of carbon sources is an organism comprising DNA encoding protein X of a dehydratase or protein X in combination with at least one of protein 1, protein 2 and protein 3. The protein X may be isolated from a diol dehydratase or a glycerol dehydratase. The present invention also provides host cells comprising protein X that are capable of increased production of 1,3-propanediol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:30376 USPATFULL

TITLE:

METHOD FOR THE RECOMBINANT PRODUCTION OF

1,3-PROPANEDIOL

INVENTOR(S):

DUNN-COLEMAN, NIGEL, LOS GATOS, CA, UNITED STATES DIAZ-TORRES, MARIA, SAN MATEO, CA, UNITED STATES CHASE, MATTHEW W., CHESTERFIELD, MO, UNITED STATES TRIMBUR, DONALD, REDWOOD CITY, CA, UNITED STATES

NUMBER	KIND	DATE	
US 2003022323 US 1999-308207 WO 1997-US20873	A1 A1	20030130 19990513 19971113	(

PATENT INFORMATION: APPLICATION INFO.:

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE: DEBRA J GLAISTER, GENENCOR INTERNATIONAL INC, 925 PAGE MILL ROAD, PALO ALTO, CA, 94304
40
1

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 27 Drawing Page(s)

LINE COUNT:

4264

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 18 OF 44 USPATFULL on STN L8

Enzymatic conversion of GDP-mannose to GDP-fucose  ${f T}{f I}$ 

This invention provides methods for practical enzymatic conversion of AB GDP-mannose to GDP-fucose. These methods are useful for efficient synthesis of reactants used in the synthesis of fucosylated

oligosaccharides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:346811 USPATFULL

TITLE:

Enzymatic conversion of GDP-mannose to GDP-fucose

INVENTOR(S):

Sjoberg, Eric R., San Diego, CA, United States

PATENT ASSIGNEE(S): Neose Technologies, Inc., Horsham, PA, United States (U.S. corporation)

NUMBER KIND DATE US 6500661 B1 20021231 US 1999-231905 19990114 (9) PATENT INFORMATION: APPLICATION INFO.:

NUMBER DATE \_\_\_\_\_

PRIORITY INFORMATION: US 1998-71076P 19980115 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Slobodyansky, Elizabeth

LEGAL REPRESENTATIVE: Townsend and Townsend and Crew LLP

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM:

16 Drawing Figure(s); 11 Drawing Page(s) NUMBER OF DRAWINGS:

2332 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 19 OF 44 USPATFULL on STN L8

Mutant 1,3-propandiol dehydrogenase ΤI

The present invention relates to mutant 1,3-propanediol dehydrogenase AB and a novel microorganism that is capable of growing in concentrations of at least 105 g/l 1,3-propanediol, levels normally toxic to wild-type microorganisms. The present invention also provides expression vectors and host cells comprising the mutant 1,3-propanediol dehydrogenase as well as methods for producing 1,3-propanediol comprising the use of

cells comprising the mutant 1,3-propanediol dehydrogenase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:275923 USPATFULL

TITLE:

Mutant 1,3-propandiol dehydrogenase

INVENTOR(S):

Donald, Trimbur E., Redwood City, CA, United States

Gregory, Whited M., Belmont, CA, United States Selifonova, Olga V., Navarre, MN, United States

Genencor International, Inc., Rochester, NY, United PATENT ASSIGNEE(S):

States (U.S. corporation)

NUMBER

NUMBER DATE \_\_\_\_\_\_

KIND DATE \_\_\_\_\_\_\_

PATENT INFORMATION: APPLICATION INFO.:

US 6468773 B1 20021022 US 2000-570778 20000514 (9)

PRIORITY INFORMATION: US 1999-134868P 19990519 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER: Achutamurthy, Ponnathapu ASSISTANT EXAMINER: Pak, Y

LEGAL REPRESENTATIVE: Ito, Richard T.

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

14

NUMBER OF DRAWINGS:

7 Drawing Figure(s); 7 Drawing Page(s)

LINE COUNT:

922

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8ANSWER 20 OF 44 USPATFULL on STN

Method for the production of 1,3-propanediol by recombinant organisms TI

comprising genes for vitamin B12 transport

Recombinant organisms are provided comprising genes encoding genes AΒ encoding glycerol dehydratase, 1,3-propanediol oxidoreductase, a gene encoding vitamin B.sub.12 receptor precursor (BtuB), a gene encoding vitamin B.sub.12 transport system permease protein(BtuC) and a gene encoding vitamin B.sub.12 transport ATP-binding protein (BtuD). The recombinant microorganism is contacted with a carbon substrate and 1,3-propanediol is isolated from the growth media.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:

2002:201883 USPATFULL

TITLE:

Method for the production of 1,3-propanediol by

recombinant organisms comprising genes for vitamin B12

INVENTOR(S):

Bulthuis, Ben A., Hoofddorp, NETHERLANDS

Whited, Gregory M., Belmont, CA, United States Trimbur, Donald E., Redwood City, CA, United States Gatenby, Anthony A., Wilmington, DE, United States

PATENT ASSIGNEE(S):

E. I. du Pont de Nemours and Company, Wilmington, DE,

United States (U.S. corporation)

Genencor International, Palo Alto, CA, United States

(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6432686	B1	20020813	
APPLICATION INFO.:	US 1999-307973		19990510	

NUMBER DATE

PRIORITY INFORMATION: US 1998-85190P 19980512 (60)

(9)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

GRANTED

FILE SEGMENT:

PRIMARY EXAMINER:

ASSISTANT EXAMINER:

NUMBER OF CLAIMS:

GRANTED

Prouty, Rebecca E.

Monshipouri, Maryam

13

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

2037

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

## **Refine Search**

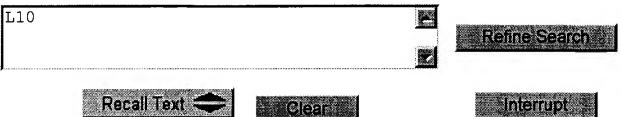
## Search Results -

Terms	Documents	
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US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

Database:



### **Search History**

DATE: Friday, June 04, 2004 Printable Copy Create Case

Set Name Query		<b>Hit Count</b>	<u>Set Name</u>
side by side	e		result set
$DB=U_{k}$	SPT; PLUR=YES; OP=OR		
<u>L10</u>	laffend.in.	4	<u>L10</u>
<u>L9</u>	dihydorxyacetone and L8	3	<u>L9</u>
<u>L8</u>	glycerol dehydratase and L7	92557	<u>L8</u>
<u>L7</u>	Citrobacter and L6	17	<u>L7</u>
<u>L6</u>	L5 and Klebsiella	69	<u>L6</u>
<u>L5</u>	L4 and (1,3-propanediol)	7750	<u>L5</u>
<u>L4</u>	bioconversion process	1742378	<u>L4</u>
<u>L3</u>	5633362.pn.	1	<u>L3</u>
<u>L2</u>	5821092.pn.	1	<u>L2</u>
<u>L1</u>	6025184.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

## **Hit List**

# Clear Generale Collection Print Ewo Refs Bkwd Refs

### Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 6514733 B1

L10: Entry 1 of 4

File: USPT

Feb 4, 2003

US-PAT-NO: 6514733

DOCUMENT-IDENTIFIER: US 6514733 B1

TITLE: Process for the biological production of 1,3-propanediol with high titer

DATE-ISSUED: February 4, 2003

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Emptage; Mark Wilmington DE
Haynie; Sharon L. Philadelphia PA
Laffend; Lisa A. Claymont DE
Pucci; Jeff P. Pacifica CA
Whited; Gregory Belmont CA

US-CL-CURRENT: 435/158; 435/155, 435/252.33

Full Title Citation Front Review Classification Date Reference **Sequences Attechnents** Claims KNMC Draw De

2. Document ID: US 6428767 B1

L10: Entry 2 of 4

File: USPT

Aug 6, 2002

US-PAT-NO: 6428767

DOCUMENT-IDENTIFIER: US 6428767 B1

TITLE: Method for identifying the source of carbon in 1,3-propanediol

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Burch; Robert R. Exton PA

Dorsch; Robert R. Hockessin DE

Laffend; Lisa Anne Claymont DE

Nagarajan; Vasantha Wilmington DE

h e b b g e e e f e h e f b e

Record List Display

Nakamura; Charles

Claymont

DE

US-CL-CURRENT: 424/1.37; 250/281, 250/282, 424/1.11, 435/6, 435/93

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KNNC Draw De

☐ 3. Document ID: US 6025184 A

L10: Entry 3 of 4

File: USPT

Feb 15, 2000

US-PAT-NO: 6025184

DOCUMENT-IDENTIFIER: US 6025184 A

TITLE: Bioconversion of a fermentable carbon source to 1,3-propanediol by a single

microorganism

DATE-ISSUED: February 15, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Laffend; Lisa Anne Wilmington DE Nagarajan; Vasantha Wilmington DE Nakamura; Charles Edwin Claymont DE

US-CL-CURRENT: 435/252.33; 435/252.3, 435/320.1

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims RVMC Draw De

☐ 4. Document ID: US 5686276 A

L10: Entry 4 of 4

File: USPT

Nov 11, 1997

US-PAT-NO: 5686276

DOCUMENT-IDENTIFIER: US 5686276 A

TITLE: Bioconversion of a fermentable carbon source to 1,3-propanediol by a single

microorganism

DATE-ISSUED: November 11, 1997

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Laffend; Lisa Anne Wilmington DE Nagarajan; Vasantha Wilmington DE Nakamura; Charles Edwin Claymont DE

US-CL-CURRENT: <u>435/158</u>; <u>435/252.31</u>, <u>435/252.33</u>

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KWAC Draw, De

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## Refine Search

#### Search Results -

Terms	Documents
dihydorxyacetone and L8	3

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database

Database:

US OCR Full-Text Database EPO Abstracts Database JPO Abstracts Database Derwent World Patents Index IBM Technical Disclosure Bulletins

Search:



### **Search History**

DATE: Friday, June 04, 2004 Printable Copy Create Case

Set Name side by side		Hit Count	Set Name result set
DB=US	SPT; PLUR=YES; OP=OR		
<u>L9</u>	dihydorxyacetone and L8	3	<u>L9</u>
<u>L8</u>	glycerol dehydratase and L7	92557	<u>L8</u>
<u>L7</u>	Citrobacter and L6	17	<u>L7</u>
<u>L6</u>	L5 and Klebsiella	69	<u>L6</u>
<u>L5</u>	L4 and (1,3-propanediol)	7750	<u>L5</u>
<u>L4</u>	bioconversion process	1742378	<u>L4</u>
<u>L3</u>	5633362.pn.	1	<u>L3</u>
<u>L2</u>	5821092.pn.	1	<u>L2</u>
<u>L1</u>	6025184.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

## **Hit List**



Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6479438 B2

L9: Entry 1 of 3

File: USPT

Nov 12, 2002

US-PAT-NO: 6479438

DOCUMENT-IDENTIFIER: US 6479438 B2

TITLE: Gel inhibited liquid carrier for a biocide containing a carbodiimide and an

emulsifier mixture

DATE-ISSUED: November 12, 2002

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Narayanan; Kolazi S.

Wayne

NJ

Jon; Domingo I.

New York

NY

US-CL-CURRENT: <u>504/363</u>; <u>514/241</u>, <u>514/637</u>, <u>514/788</u>

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMC Draw De

☐ 2. Document ID: US 6020367 A

L9: Entry 2 of 3

File: USPT

Feb 1, 2000

US-PAT-NO: 6020367

DOCUMENT-IDENTIFIER: US 6020367 A

TITLE: Supersaturated ascorbic acid solutions

DATE-ISSUED: February 1, 2000

INVENTOR-INFORMATION:

NAME

CITY

STATE

COUNTRY

ZIP CODE

Duffy; John A.

West Milford

NJ

Ptchelintsev; Dmitri

Mahwah

NJ

US-CL-CURRENT: 514/474; 424/401, 424/450, 424/489, 424/490, 514/263.31, 514/440, 514/456, 514/457, 549/315

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims 1900C Draw De

h e b b g e e e f e h ef b

☐ 3. Document ID: US 5962018 A

L9: Entry 3 of 3

File: USPT

Oct 5, 1999

US-PAT-NO: 5962018

DOCUMENT-IDENTIFIER: US 5962018 A

\*\* See image for Certificate of Correction \*\*

TITLE: Method of treating the skin with organic acids in anhydrous microsphere

delivery systems

DATE-ISSUED: October 5, 1999

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Curtis; Ernest S.

Milford

PΑ

Kalafsky; Robert

Ogdensburg

NJ

Kaplan; Elinor R.

Paterson

NJ

US-CL-CURRENT: 424/450; 514/557, 514/574

Full   T	itle   Citation   Fr	ont Review	Classification	Date Reference	- <b>Seq.</b>	ences Altachm	ents Claims	EXMC Draw	at De
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	dihydorxyacet	one and L8						3	

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### Search Results - Record(s) 1 through 10 of 17 returned.

☐ 1. Document ID: US 6603048 B1

L7: Entry 1 of 17

File: USPT

Aug 5, 2003

US-PAT-NO: 6603048

DOCUMENT-IDENTIFIER: US 6603048 B1

TITLE:  $\underline{Process}$  to separate  $\underline{1,3-propanediol}$  or glycerol, or a mixture thereof from a

biological mixture

DATE-ISSUED: August 5, 2003

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Corbin; David Richard

West Chester

PΑ

Norton; Tucker

Avondale

PΑ

US-CL-CURRENT: 568/868; 568/869, 568/870

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences. All	chinenta	Claims	KOMIC	Draw, D
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☐ 2. Document ID: US 6576450 B2

L7: Entry 2 of 17

File: USPT

Jun 10, 2003

US-PAT-NO: 6576450

DOCUMENT-IDENTIFIER: US 6576450 B2

TITLE: Polyhydroxyalkanoate production from polyols

DATE-ISSUED: June 10, 2003

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Skraly; Frank A.

Boston

MΑ

Peoples; Oliver P.

Arlington

MΑ

US-CL-CURRENT: <u>435/135</u>

Full Title Citation Front Review Classification Date Reference Sequences Altectionerts Claims Killic Draw, Do

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3. Document ID: US 6514733 B1

L7: Entry 3 of 17

File: USPT

Feb 4, 2003

US-PAT-NO: 6514733

DOCUMENT-IDENTIFIER: US 6514733 B1

TITLE: Process for the biological production of 1,3-propanedial with high titer

DATE-ISSUED: February 4, 2003

INVENTOR-INFORMATION:

STATE ZIP CODE COUNTRY CITY NAME

DΕ Wilmington Emptage; Mark PΑ Philadelphia Haynie; Sharon L. Laffend; Lisa A. Claymont DE CA Pucci; Jeff P. Pacifica

CA Whited; Gregory Belmont

US-CL-CURRENT: 435/158; 435/155, 435/252.33

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims Nimic Draw De

4. Document ID: US 6432686 B1

L7: Entry 4 of 17

File: USPT

Aug 13, 2002

US-PAT-NO: 6432686

DOCUMENT-IDENTIFIER: US 6432686 B1

TITLE: Method for the production of 1,3-propanediol by recombinant organisms comprising genes for vitamin B12 transport

DATE-ISSUED: August 13, 2002

INVENTOR-INFORMATION:

ZIP CODE COUNTRY CITY STATE NAME

NLHoofddorp Bulthuis; Ben A.

CA Belmont Whited; Gregory M.

CA Redwood City Trimbur; Donald E. DE Gatenby; Anthony A. Wilmington

US-CL-CURRENT: 435/158; 435/252.3, 435/320.1

Title Citation Front Review Classification Date Reference Sequences Attachments Claims KIMC Draw Do

5. Document ID: US 6428992 B1

L7: Entry 5 of 17

File: USPT

Aug 6, 2002

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### Record List Display

US-PAT-NO: 6428992

DOCUMENT-IDENTIFIER: US 6428992 B1

TITLE: Process for the purification of 1,3-propanediol from a fermentation medium

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Roturier; Jean-Michel Chappelle d'Armentieres FR
Fouache; Catherine Sailly la Bourse FR

Berghmans; Elie Erps Kwerps BE

US-CL-CURRENT: 435/158; 435/106, 435/115, 435/116, 562/513



### ☐ 6. Document ID: US 6428767 B1

L7: Entry 6 of 17

File: USPT

Aug 6, 2002

US-PAT-NO: 6428767

DOCUMENT-IDENTIFIER: US 6428767 B1

TITLE: Method for identifying the source of carbon in 1,3-propanediol

DATE-ISSUED: August 6, 2002

INVENTOR-INFORMATION:

ZIP CODE COUNTRY STATE CITY NAME PA Exton Burch; Robert R. Hockessin DE Dorsch; Robert R. Claymont DE Laffend; Lisa Anne Wilmington DΕ Nagarajan; Vasantha

Nakamura; Charles Claymont DE

US-CL-CURRENT: 424/1.37; 250/281, 250/282, 424/1.11, 435/6, 435/93

# Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw Do

### 7. Document ID: US 6406895 B1

L7: Entry 7 of 17

File: USPT

Jun 18, 2002

US-PAT-NO: 6406895

DOCUMENT-IDENTIFIER: US 6406895 B1

TITLE: Process for the production of 1,3-propanediol by fermentation

DATE-ISSUED: June 18, 2002

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### Record List Display

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Defretin; Sophie

Locon

FR

Delelis; Brigitte

Vendin les Bethune

FR

Segueilha; Laurent

Lambersart

FR

US-CL-CURRENT: 435/158; 435/252.31, 435/252.33, 435/252.7

Full Title Citation Front Review Classification Date Reference **Sequences Altachments** Claims KWIC Draw De

8. Document ID: US 6329183 B1

L7: Entry 8 of 17

File: USPT

Dec 11, 2001

US-PAT-NO: 6329183

DOCUMENT-IDENTIFIER: US 6329183 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Polyhydroxyalkanoate production from polyols

DATE-ISSUED: December 11, 2001

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Skraly; Frank A.

Boston

MA

Peoples; Oliver P.

Arlington

MA

US-CL-CURRENT: <u>435/135</u>

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw. De

9. Document ID: US 6136576 A

L7: Entry 9 of 17

File: USPT

Oct 24, 2000

US-PAT-NO: 6136576

DOCUMENT-IDENTIFIER: US 6136576 A

TITLE: Method for the recombinant production of 1,3-propanediol

DATE-ISSUED: October 24, 2000

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Diaz-Torres; Maria

San Mateo

Belmont

US-CL-CURRENT:  $\underline{435/158}$ ;  $\underline{435/232}$ ,  $\underline{530/350}$ ,  $\underline{536/23.1}$ ,  $\underline{536/23.2}$ ,  $\underline{536/23.7}$ 

CA

Dunn-Coleman; Nigel S Chase; Matthew W.

Los Gatos

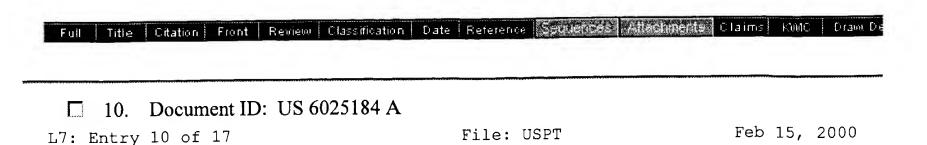
CA CA

Trimbur; Donald

Redwood City

CA

h eb b g e e e f e h ef b



US-PAT-NO: 6025184

DOCUMENT-IDENTIFIER: US 6025184 A

TITLE: Bioconversion of a fermentable carbon source to 1,3-propanediol by a single

microorganism

DATE-ISSUED: February 15, 2000

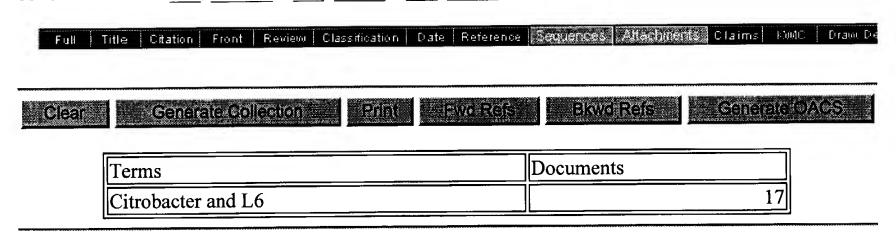
INVENTOR-INFORMATION:

Nakamura; Charles Edwin

ZIP CODE COUNTRY CITY STATE NAME

Wilmington DΕ Laffend; Lisa Anne Wilmington DΕ Nagarajan; Vasantha Claymont DE

US-CL-CURRENT: 435/252.33; 435/252.3, 435/320.1



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## Search Results - Record(s) 11 through 17 of 17 returned.

☐ 11. Document ID: US 6013494 A

L7: Entry 11 of 17

File: USPT

Jan 11, 2000

US-PAT-NO: 6013494

DOCUMENT-IDENTIFIER: US 6013494 A

TITLE: Method for the production of 1,3-propanediol by recombinant microorganisms

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nakamura; Charles E.	Claymont	DE		
Gatenby; Anthony A.	Wilmington	DE		
Hsu; Amy Kuang-Hua	Redwood City	CA		
La Reau; Richard D.	Mountain View	CA		
Haynie; Sharon L.	Philadelphia	PA		
Diaz-Torres; Maria	San Mateo	CA		
Trimbur; Donald E.	Redwood City	CA		
Whited; Gregory M.	Belmont	CA		
Nagarajan; Vasantha	Wilmington	DE		
Payne; Mark S.	Wilmington	DE		
Picataggio; Stephen K.	Landenberg	PA		
Nair; Ramesh V.	Wilmington	DE		

US-CL-CURRENT: 435/158; 435/252.3, 435/252.33, 435/254.21, 435/69.1

Full Title Citation Front Review Classification Date Reference Sequences Attackments Claims MulC Draw	Full	Title	Citation	Front	Review Classi	fication Dat	te Reference	Sequences	Attachments	Claims	KOMIC	Draw, D
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☐ 12. Document ID: US 5821092 A

L7: Entry 12 of 17

File: USPT

Oct 13, 1998

US-PAT-NO: 5821092

DOCUMENT-IDENTIFIER: US 5821092 A

TITLE: Production of  $\underline{1,3\text{-propanediol}}$  from glycerol by recombinant bacteria expressing recombinant diol dehydratase

### Record List Display

DATE-ISSUED: October 13, 1998

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Nagarajan; Vasantha

Wilmington

DE

Nakamura; Charles Edwin

Claymont

DE

US-CL-CURRENT: 435/158; 435/232, 435/252.3, 435/252.31, 435/252.33, 435/252.35, 435/252.5, 435/252.7, 435/320.1, 536/23.1, 536/23.2, 536/23.7

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMC Draw De

☐ 13. Document ID: US 5686276 A

L7: Entry 13 of 17

File: USPT

Nov 11, 1997

US-PAT-NO: 5686276

DOCUMENT-IDENTIFIER: US 5686276 A

TITLE: Bioconversion of a fermentable carbon source to 1,3-propanediol by a single microorganism

DATE-ISSUED: November 11, 1997

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Laffend; Lisa Anne

Wilmington Wilmington

 $\mathsf{DE}$ 

DE

Nagarajan; Vasantha Nakamura; Charles Edwin

Claymont

DE

US-CL-CURRENT: 435/158; 435/252.31, 435/252.33

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KNAC Draw De

L7: Entry 14 of 17

File: USPT

May 27, 1997

US-PAT-NO: 5633362

DOCUMENT-IDENTIFIER: US 5633362 A

\*\* See image for Certificate of Correction \*\*

TITLE: Production of 1,3-propanediol from glycerol by recombinant bacteria expressing recombinant diol dehydratase

DATE-ISSUED: May 27, 1997

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Nagarajan; Vasantha

Wilmington

DE

Nakamura; Charles E.

Claymont

DE

US-CL-CURRENT: 536/23.1; 435/252.3, 435/252.33, 536/22.1, 536/24.3

Full   Title	Citation Front Review	Classification	Date	Reference	Sequences 21th	nner (S)	Claims	KMMC	Draw. D
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L7: Entry 15 of 17

File: USPT

Feb 4, 1997

US-PAT-NO: 5599689

DOCUMENT-IDENTIFIER: US 5599689 A

TITLE: Process for making 1.3-propanediol from carbohydrates using mixed microbial cultures

DATE-ISSUED: February 4, 1997

INVENTOR-INFORMATION:

NAME

CITY

ZIP CODE STATE

COUNTRY

Oct 19, 1993

Haynie; Sharon L.

Philadelphia

PA

Wagner; Lorraine W.

Newark

DE

US-CL-CURRENT: 435/42; 435/158

Fall Ti	le   Citation   Front	Review (	Diassification	Date	Reference	Sequences	Altaciments	Claims	MMC	Draw De
									,	
□ 1 <i>6</i>	o. Document II	): US 52	54467 A							

File: USPT

US-PAT-NO: 5254467

L7: Entry 16 of 17

DOCUMENT-IDENTIFIER: US 5254467 A

TITLE: Fermentive production of 1,3-propanediol

DATE-ISSUED: October 19, 1993

INVENTOR-INFORMATION:

STATE ZIP CODE COUNTRY CITY NAME DE Langenfeld Kretschmann; Josef DE Haan Carduck; Franz-Josef DΕ Oldenburg Deckwer; Wolf-Dieter DE Brunswick Tag; Carmen DE Wolfenbuettel Biebl; Hanno

US-CL-CURRENT: 435/158; 435/842

☐ 17. Document ID: US 5164309 A

L7: Entry 17 of 17

File: USPT

Nov 17, 1992

US-PAT-NO: 5164309

DOCUMENT-IDENTIFIER: US 5164309 A

TITLE: Process for the microbiological preparation of 1,3-propane-diol from

glycerol by citrobacter

DATE-ISSUED: November 17, 1992

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Gottschalk; G.

Nortenhardenberg

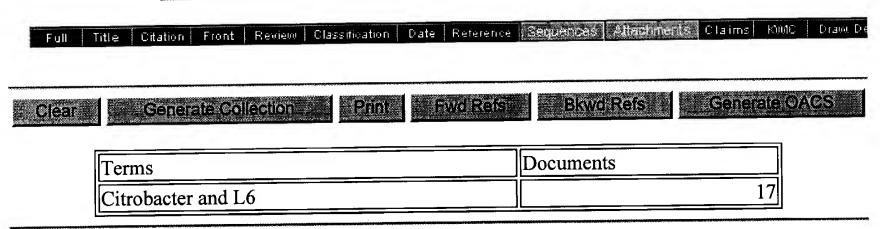
DE

Averhoff; Beate

Gottingen

DE

US-CL-CURRENT: 435/158; 435/252.1



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